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185
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May, 1928

DOCTOR HOWARD HONORED

Dr. L. O. Howard was recently elected an honorary member of the Societas Entomologica Cekoslovenica. The Entomological Society of Florida has also elected him to honorary membership. Dr. Howard has also received an illuminated address signed by 36 members of the Jugatae, the entomological society of Cornell University, congratulating him on his long service, inasmuch as he was the first student of entomology to be graduated from Cornell.

TROPICAL AND SUBTROPICAL PLANT INSECT INVESTIGATIONS

A. C. Baker, Senior Entomologist, in Charge

F. H. Benjamin collected specimens of Anastrepha ludens Loew in a sour orange which he picked from a tree in Matamoros, Tamaulipas, opposite Brownsville, Tex., on May 3, 1928. A thorough search during the growth of the crop of 1927-1928 failed to reveal any infestation in the fruit growing on the Texas side of the lower Rio Grande Valley.

Dr. S. B. Fracker, in charge of domestic plant quarantines for the Federal Horticultural Board, and R. E. McDonald, entomologist for the State of Texas, were in Harlingen, Tex., on May 16 to discuss a revision of the quarantine of the Mexican fruit worm.

The work of eradicating the Mexican fruit worm in the lower Rio Grande Valley of Texas during May was devoted chiefly to the elimination of summer host fruits and taking a census of all host fruits. The census is to be used as a gauge in planning future operations. The cleanup of summer host fruits has been entirely satisfactory, and there is every assurance that the host-free period, March to October, will be thoroughly successful.

P. A. Hoidal, in charge of eradication of the Mexican fruit worm, went to Corpus Christi late in May to determine whether a cannery there was going to operate a grapefruit preserving plant in the lower Rio Grande Valley next season. Adequate canning facilities are needed in the valley to dispose of culls and of fruit from possibly quarantined orchards. He also visited San Antonio to check up on fruit shipments from the valley.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Senior Entomologist, in Charge

The summer laboratory of the pea aphid project at Columbus, Wis., was opened on May 1. During the present season this project will include studies along ecological lines, and will be in charge of J. E. Dudley, Jr.

W. H. White visited Norfolk, Va., Chadbourn, N. C., and Charleston, S. C., in the early part of May to observe the results of the spring control methods against the seed corn maggot on potatoes, and to check over the plan of work on strawberry insects for the coming season.

N. F. Howard visited Philadelphia, Pa., and vicinity, May 1 and 2, to study methods used in controlling the Japanese beetle by parasites and insecticides.

On May 3 C. H. Griffith, of the Twin Falls, Idaho, sugar-beet leafhopper laboratory, established a temporary summer substation at Corvallis, Oreg.

C. O. Bare, Sanford, Fla., visited Alhambra, Saticoy, Santa Ana, and other points in California in the latter half of May, to study methods of rearing parasites and predators on a large scale.

Dr. Bernard Trouvelot, Professor of Entomology, National School of Horticulture, Versailles, France, who is studying parasites of the Colorado potato beetle, visited the Baton Rouge, La., laboratory, May 25, and collected some parasitized material for shipment to his rearing station at Geneva, N. Y.

K. L. Cockerham, Biloxi, Miss., visited A. & M. College, Miss., May 29, to confer with Prof. R. W. Harned and other State officials regarding the work on eradication of the sweet potato weevil.

J. E. Dudley, Jr., Madison, Wis., has devised a method for checking infestation counts of certain insects on some cereal and truck crops. The device consists of a box 20 inches long, 10 inches wide, and 14 inches high, equipped with a sliding bottom, faced with a knife edge. The box has adjustable legs to regulate the depth of cutting and thus insure comparable samples. When it is desired to secure the insect population of peas or alfalfa, the bottom is opened, the box suddenly plunged into the selected spot in the field, and the bottom pulled shut by cables so rapidly that practically no insects escape. The knife edge cuts the plants as it progresses. A screen cylinder containing cyanide flakes is placed in the box immediately and the whole insect population is killed. This device is used for checking the relative infestations as secured with a net and the aphidozer. Any one interested in this method may obtain specifications by communicating with the U. S. Entomological Laboratory, R. 3, Columbus, Wis.

Temporary appointments have been given to E. C. Tatman, Sanford, Fla., G. R. McGinnis, Corvallis, Oreg., and C. H. Smith, Richfield, Utah.

M. H. Atwood, temporary field assistant, stationed at Grand Bay, Ala., resigned May 1 to accept a position with the U. S. Public Health Service, Biloxi, Miss.

CEREAL AND FORAGE INSECT INVESTIGATIONS

W. H. Larrimer, Senior Entomologist, in Charge

Dr. Bernard Trouvelot, of the Institut des Recherches Agronomiques, Paris, was a visitor to the field laboratory at New Orleans, devoted to sugar-cane insects, on May 23 and 24. He was taken to a near-by sugar plantation, where he saw growing sugar cane and examples of injuries caused by insects.

J. W. Ingram, in charge of the sublaboratory at Crowley, for the study of rice insects, was in New Orleans for conference in May.

At the invitation of Prof. R. W. Harned, T. E. Holloway attended a meeting of the Biology Club at A. & M. College, Mississippi, on May 9, and gave a talk on the subject "Sugar cane and sugar-cane insects."

Word has been received from S. R. Vandenberg, associate entomologist of the experiment station at the Island of Guam, that a very good emergence was obtained from the shipment of 1,700 spin-ups of Exeristes roborator sent him last fall.

On May 3 Geo. P. Engelhardt, for 25 years director of the Brooklyn Museum, visited the U. S. Entomological Laboratory at Webster Groves, Mo., to examine the few Aegeriidae in the collection there, preparatory to publishing a monograph of the family. He supplied several names of prospective collectors of living adult corn billbugs (*Calendra* spp.), for use in the present project of propagating egg parasites to be introduced into Hawaii for the control of the Hawaiian sugar-cane borer, Rhabdocnemis obscurus.

Harold A. Jaynes, formerly of the Japanese Beetle Laboratory, has accepted a transfer to the Division of Cereal and Forage Insects. He will conduct investigations of parasites of the sugar-cane moth borer in South America, principally in Argentina, with the object of importing into the United States such species as may be promising. It is hoped that this program will result in some control of the sugar-cane moth borer in this country.

COTTON-INSECT INVESTIGATIONS

B. R. Coad, Entomologist, in Charge

J. A. Evans, Assistant Chief of the Cooperative Extension Work, Washington, was a visitor at the Tallulah laboratory from May 8 to May 11, conferring with B. R. Coad on cooperation of the Bureau of Entomology with the Extension Service and State Experiment Station of Oklahoma, in control of the boll weevil.

S. H. McCrory, Chief, Division of Engineering, Bureau of Public Roads, was a visitor at the Tallulah laboratory on May 23, conferring with B. R. Coad regarding cooperative engineering work.

On May 16 and 17 R. C. Gaines and V. V. Williams attended a conference with J. A. Evans, Assistant Chief of the Cooperative Extension Work, Washington, and officers of the Oklahoma Experiment Station and Extension Service at Stillwater, to arrange for cooperative work in Oklahoma during 1928 between the Bureau of Entomology and the Oklahoma Experiment Station and Extension Service. At this conference it was agreed that the Bureau of Entomology in cooperation with the State of Oklahoma would conduct a series of boll weevil control tests at two points in southeastern Oklahoma, and that the Bureau of Entomology would make records of weevil infestation at weekly intervals throughout the season in as many counties as possible in southeastern Oklahoma. These infestation records will be forwarded to the Director of Extension at Stillwater, where they will be analyzed by a central committee composed of the Extension Director, Extension Entomologist, and Experiment Station Entomologists. On the basis of these records recommendations will be made for control of the boll weevil in the various areas.

A. J. Chapman, who for the past two years has been in Arizona engaged in scouting and other investigations of the Thurberia weevil, has returned to Tallulah.

F. F. Bondy, of the Tallulah laboratory, has been placed in charge of the cooperative work of the Bureau of Entomology and State Experiment Station, recently established in South Carolina, with headquarters at Florence.

R. E. Mitchell and John Payne, airplane pilots of the Tallulah laboratory, spent several days in the latter part of May at Albany, Ga., dusting pecan trees by airplane, in cooperation with J. B. Demaree, of the Division of General Orchard Disease Investigations, Bureau of Plant Industry.

C. C. McCall, of Whitman, Miss., and Clyde F. Rainwater, Waynesboro, Miss., have been employed as temporary field assistants at the Tallulah laboratory for the summer months.

W. A. Stevenson, of the Tallulah laboratory, has returned to Arizona to continue studies on the Thurberia weevil in cultivated cotton in the Santa Cruz Valley.

In the last few days of May Professor Bernard Trouvelot, of the École Nationale d'Horticulture, Versailles, France, was a visitor at the field laboratory at Tallulah, La., to study the organization and methods of the laboratory, and the literature on cotton insects, and to make contacts that will assist him in his investigations. Professor Trouvelot has begun a trip around the world to study the ecology of certain cultivated plants and their insect enemies under different conditions of soil and climate, and is particularly interested in the subject of insect control by means of the introduction and propagation of parasites and predators.

On May 28 and 29 Dr. W. V. King visited Florence, S. C., to confer with Dr. G. M. Armstrong with regard to studies of the cotton leaf hopper.

GIPSY MOTH AND BROWN-TAIL MOTH INVESTIGATIONS

A. F. Burgess, Senior Entomologist, in Charge

Dr. M. T. Smulyan, of the gipsy moth laboratory, spent about a month in April and early in May at the U. S. National Museum, studying the genus *Perilampus*, with a view to preparing a revision of it.

On May 31 a conference was held at Hartford, Conn., to discuss the gipsy moth situation, Dr. W. E. Britton, State Entomologist of Connecticut, acting as chairman. The speakers at the conference were Dr. T. J. Headlee, State Entomologist of New Jersey, G. W. Howard and H. L. McIntyre of the New York State Conservation Department, Dr. T. L. Guyton of the Bureau of Plant Industry of Pennsylvania, J. T. Ashworth of Connecticut, W. A. Osgood of New Hampshire, George A. Smith of Massachusetts, H. L. Bailey of Vermont, E. L. Newdick of Maine, H. Horovitz of Rhode Island, and A. F. Burgess of the U. S. Department of Agriculture. Much of the discussion emphasized the recent increase in the abundance of the gipsy moth and the present danger of its spreading into the barrier zone, the opinion of the meeting being that considerable suppression work as a protection to the zone should be done just east of it.

A. F. Burgess and S. S. Crossman spent several days of the week of May 21 in Washington, in conference with department officials.

Professor J. A. Manter, of Storrs, Conn., with several students of entomology, visited the gipsy moth office and laboratory on May 25.

On May 31 the season in New England was about ten days late, as indicated by the development of the foliage and the hatching of gipsy moth eggs. On this date hatching was practically completed.

FOREST INSECT INVESTIGATIONS

F. C. Craighead, Senior Entomologist, in Charge

Dr. F. C. Craighead spent a week early in May at Melrose Highlands, Mass., consulting with A. F. Burgess and C. W. Collins on the rearrangement of the gipsy moth investigations, necessitated by the transfer of research work on this project to the Division of Forest Insects. On the same trip a day was spent at Harvard Forest, consulting with H. J. MacAloney on white pine weevil investigations.

J. A. Beal and R. A. St. George report the results of several sprays used in an attempt to control the locust borer. They find that emulsions of orthodichlorobenzene and paradichlorobenzene are very effective. Mr. St. George is at present at the Pisgah National Forest, N. C., operating with a crew from the Forest Products Laboratory in a cooperative study.

Dr. Ivar Trägardh, Forest Entomologist of Sweden, arrived in Washington the last week in May and consulted with this office on the arrangement of an itinerary to visit some of the forest-insect field laboratories and the experiment stations of the Forest Service. He will also visit some of the other field laboratories of the Bureau of Entomology. On his itinerary he will visit the southern and extreme western laboratories, and return through Minnesota and the Central States.

J. C. Evenden reports that the Bighole control project is now well under way. In the last week in May some 25 camps were established, involving about 500 men. During the next four weeks \$100,000 will be spent in treating nearly 75,000 trees infested with Dendroctonus monticolae Hopk., on an area of about 400 square miles. To cover this area effectively and economically in such a short time will require everyone connected with the project to be constantly on the jump. C. S. Webb, representing the Forest Service, is in charge of the project.

J. M. Miller, in charge of the field laboratory at Palo Alto, Calif., reports that field projects are now under way in his district. H. L. Person will be located in the Modoc National Forest, Calif., on co-operative studies with the California Forest Experiment Station. F. P. Keen is planning to conduct again the annual survey of the large California-Oregon project in southern Oregon.

On May 3 William Middleton, of this office, examined considerable boxwood in northern Virginia, visiting Strasburg, Winchester, Leesburg, and Warrenton.

On May 15 C. R. Willey, assistant entomologist of the Division of Plant Industry, Virginia State Department of Agriculture, visited this office to confer with Mr. Middleton on the situation in Virginia regarding the box leaf miner.

BEE CULTURE INVESTIGATIONS

James I. Hambleton, Apiculturist, in Charge

On May 19 Dwight K. Grady, Secretary of the Dried Fruit Association of California, exporters of honey, met with R. R. Pailthorp and H. J. Clay, of the Bureau of Agricultural Economics, and Jas. I. Hambleton, of the Division of Bee Culture Investigations, to discuss certain proposed changes in the color divisions of the United States grades for honey. The general outcome of the conference was that changes in the present grades are neither needed nor particularly desirable at this time.

Jas. I. Hambleton was present by invitation at the oral examination, on May 28, of Lloyd M. Bertholf for the degree of Doctor of Philosophy in zoology at the Johns Hopkins University. Mr. Bertholf has held a temporary appointment at the Bee Culture Laboratory during the last few summers. The major problem for his degree work was the response of the honeybee to light. While at the university Mr. Hambleton conferred with Dr. A. H. Pfund concerning improvements in the Pfund honey grader, which was adopted in 1925 as the official color grader of the United States Department of Agriculture. Mr. Hambleton also conferred with Dr. Raymond Pearl about the biometrical studies now being made at the Bee Culture Laboratory.

At the Washington Club, on May 29, Jas. I. Hambleton gave an illustrated talk on the life and habits of the honeybee.

J. E. Eckert, of the Intermountain Bee Culture Field Laboratory, Laramie, Wyo., has just returned from a trip to Lander, Wyo., and Fromberg, Mont., where the laboratory has established temporary experimental apiaries. He reports that winter losses are somewhat above the average.

E. L. Sechrist, of this office, and R. S. Kifer, of the Bureau of Agricultural Economics, who are now making a survey of the cost of honey production and a survey of methods of management in the Intermountain States, report that the beekeepers in those States are giving them fine cooperation in securing data.

D. H. Hillman, State Inspector of Apiaries for Utah, one of the cooperators with Messrs. Sechrist and Kifer, and who was assisting in studies on the cost of honey production, recently fell while doing inspection work and was severely injured.

On May 19 Carlton E. Burnside went to Leesburg, Va., to examine several apiaries where abnormal death of adult bees had been reported.

DECIDUOUS-FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Associate Chief of Bureau, in Charge

Dr. F. H. Lathrop, in charge of blueberry maggot investigations at Cherryfield, Me., spent May 28 and 29 in Washington, discussing operations under way in connection with this project.

Dr. B. A. Porter, in charge of the Vincennes, Ind., laboratory, recently spent several days in Washington discussing work under way. He has now returned to his permanent headquarters. L. A. Stearns, of the Ohio oriental peach moth laboratory, visited the Vincennes laboratory on April 30 and May 1. Professors J. J. Davis of Purdue University and W. P. Flint and S. C. Chandler of the Illinois Natural History Survey, Urbana, visited the Vincennes laboratory on May 16 and discussed the codling moth work under way in Illinois and Indiana.

Fred E. Brooks, in charge of the field laboratory at French Creek, W. Va., visited the offices in Washington and at Bell, Md., on May 14 to 16, to confer about investigations of chestnut curculios. Recent visitors at the French Creek field laboratory include Boyd Carfer, of the Portland Cement Association, Parkersburg, W. Va., Dr. G. O. Young, Buckhannon, W. Va., and John M. Wolverton, Washington, D. C.

C. R. Gross, of the Bureau of Chemistry and Soils, will be stationed at the Wenatchee, Wash., laboratory for cooperative work with insecticides and the spray-residue problem. E. J. Newcomer, in charge of the field laboratory at Yakima, Wash., and C. R. Gross, of the Food, Drug, and Insecticide Administration, spent May 17 and 18 at Pullman, Wash., conferring with members of the Washington Experiment Station.

Of the 8,000 Ascogaster parasites of the codling moth collected at Yakima in 1927, over 4,000 have been distributed to other States, two lots each having been sent to Colorado and California, and one each to Oregon, New Mexico, and Arizona.

TAXONOMIC INVESTIGATIONS

S. A. Rohwer, in Charge

Dr. Ivar Trägardh, in charge of Forest Entomology, Stockholm, Sweden, was in Washington from May 23 to May 26, and while here visited Dr. Böving and other specialists in the Division of Taxonomy. Dr. Trägardh was especially interested in the preservation of specimens and the arrangement of the collection of coleopterous larvae.

Dr. Harrison G. Dyar's revision of the systematic portion of "The Mosquitoes of North and Central America and the West Indies" has just appeared as Publication No. 387 of the Carnegie Institution of Washington, under the title, "The Mosquitoes of the Americas." It supplements the Howard, Dyar and Knab monograph, which has long been out of print, and will be of great importance to medical entomologists and others interested in mosquito problems. The classification has been thoroughly revised and brought up to date, and many species discovered since the publication of the original monograph have been described and illustrated in this volume.

Dr. Frank J. Psota, of Chicago, visited the Division of Taxonomy for several days, beginning May 12, to study material of the genus *Moneilema* in the collections of Coleoptera. Dr. Psota is a surgeon by profession, but owns what is probably the largest private collection of beetles in this country. While here he arranged for the ultimate placing of his collection in the U. S. National Museum.

Dr. Edwyn P. Reed, of Valparaiso, Chile, spent May 27 and 28 in the Museum discussing buprestids, scarabaeids, and lampyrids with the various coleopterists.

Dr. D. M. DeLong, of Ohio State College, spent the evenings of May 17, 18, and 19 in the Museum, working on types of the jassid genus *Deltoccephalus* in connection with a revision which he is preparing.

C. A. Thomas, of the Pennsylvania State College, spent May 1 and 2 working on elaterid larvae with Dr. Böving.

INSECTS AFFECTING MAN AND ANIMALS

F. C. Bishopp, Senior Entomologist, in Charge

On May 16 F. C. Bishopp and Prof. L. I. Case, of Blacksburg, Va., visited Burkes Garden, Va., on business relating to the cooperative work under way in that locality for the control of the cattle grub.

In the week of May 14 D. C. Parman made a trip to Laredo, Brownsville, and other points in southern Texas, to determine the status there of the screw worm and other pests of livestock.

On May 31 F. C. Bishopp and Dr. W. V. King, in charge of the field laboratory at Mound, La., for the study of malaria mosquitoes, conferred with Dr. B. L. Arms, State health officer of Florida, and E. L. Filby, State sanitary engineer, regarding plans for a cooperative survey of the troublesome mosquitoes of the interior of Florida.

LIBRARY

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NEW BOOKS

Ashburn, Sam.

Fly trapping experiments in west Texas. National Wool Grower v. 18, No. 3, p. 33-34, illus., March, 1928.

Bailey, Vernon.

Animal life in the Carlsbad Cavern. 195 p. Baltimore, Williams & Wilkins, 1928. (Monographs of the American Society of Mammalogists No. 3.)

Claude-Joseph, F.

Recherches biologiques sur les prédateurs du Chili. Ann. Sci. Nat. ser. 10, v. 11, p. 67-207, illus., April, 1928.

Cockerell, T. D. A.

Zoology of Colorado. 262 p., illus. Boulder, Colo., pub. by the University of Colorado, 1927. (Insects, p. 143-230.)

Coleopterological contributions. v. 1, No. 1, Jan., 1927. Chicago, Frank J. Psota, Nov. 1927. (Wolcott, A. B. Review of the Cleridae of Costa Rica, p. 1-104.)

Dyar, H. G.

The mosquitoes of the Americas. 616 p., incl. 123 pl. Washington, D. C., Carnegie Institution of Washington, 1928. (Carnegie Institution of Washington. Pub. No. 387.) (Bibliography [List of publications cited by abbreviation], p. 597-602.)

Fruits and Gardens. New spray manual, the fruit grower's handbook, a most dependable guide in identifying, controlling and destroying plant diseases and insects attacking deciduous fruits. 120 p., illus. Rev. ed. Zeeland, Mich., (1928?) "Revision of the one originally prepared by Chester G. Campbell." Acknowledgment, signed W. C. Dutton.

Gould, G. M.

Gould's medical dictionary. Ed. 2. 1522 p. Philadelphia, Blakiston, 1928.

Jordan, E. O. and Falk, I. S. editors.

The newer knowledge of bacteriology and immunology. By eighty-two contributors. 1196 p., illus. Chicago, University of Chicago Press, April, 1928.

Joyeux, Charles.

Précis de médecine coloniale. 831 p., illus. Paris, Masson et cie, 1927.

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Insect enemies of California pines and their control. 113 p., illus. Sacramento, Calif., State Printing Office, 1928. (Calif. Dept. Nat. Resources. Div. Forestry Bul. 7.)

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